Published in final edited form as:

J Immigr Minor Health. 2012 October ; 14(5): 731–737. doi:10.1007/s10903-011-9543-9.

Health Care Access and Utilization Among US-Born and Foreign-Born Asian Americans

Jiali Ye,

National Center for Primary Care, Community Health and Preventive Medicine, Morehouse School of Medicine, 720 Westview Dr., Atlanta, GA 30310, USA; Department of Community Health and Preventive Medicine, Morehouse School of Medicine, Atlanta, GA, USA

Dominic Mack,

National Center for Primary Care, Community Health and Preventive Medicine, Morehouse School of Medicine, 720 Westview Dr., Atlanta, GA 30310, USA; Department of Internal Medicine, Morehouse School of Medicine, Atlanta, GA, USA

Yvonne Fry-Johnson, and

National Center for Primary Care, Community Health and Preventive Medicine, Morehouse School of Medicine, 720 Westview Dr., Atlanta, GA 30310, USA; Department of Pediatrics, Morehouse School of Medicine, Atlanta, GA, USA

Katrina Parker

National Center for Primary Care, Community Health and Preventive Medicine, Morehouse School of Medicine, 720 Westview Dr., Atlanta, GA 30310, USA; Department of Pediatrics, Morehouse School of Medicine, Atlanta, GA, USA

Jiali Ye: jye@msm.edu

Abstract

Despite efforts to eliminate inequality in health and health care, disparities in health care access and utilization persist in the United States. The purpose of this study was to compare the access to care and use of health care services of US-born and foreign-born Asian Americans. We used aggregated data from the National Health Interview Survey (NHIS) from 2003 to 2005, including 2,500 participants who identified themselves as Asian. Associations between country of birth and reported access and utilization of care in the previous 12 months were examined. After controlling for covariates, being foreign-born was negatively related to indicators of access to care, including health insurance (OR = 0.29, 95%CI = 0.18–0.48), routine care access (OR = 0.52, 95%CI = 0.36–0.75), and sick care access [OR = 0.67, 95%CI = 0.47–0.96]. Being foreign-born was also negatively related to all indicators of health care utilization (office visit: OR = 0.58, 95%CI = 0.41–0.81; seen/talked to a general doctor: OR = 0.69, 95%CI = 0.52–0.90; seen/talked to a specialist: OR = 0.42, 95%CI = 0.28–0.63) but ER visit (OR = 0.84, 95%CI = 0.59–1.20). There are substantial differences by country of birth in health care access and utilization among Asian Americans. Our findings emphasize the need for developing culturally sensitive health services and intervention programs for Asian communities.

Keywords

Access to care; Asian American; Foreign-born; Health care services

Introduction

One of the Healthy People 2010 goals is the elimination of disparities in access to high-quality health care [1]. Health care access and utilization are important factors associated with disease prevention, early stage diagnosis and treatment, as well as overall health outcomes [2, 3]. Access to care is often considered a critical indicator of health disparities and it has been repeatedly reported that there are racial and socioeconomic disparities in access to care in the United States [4–7]. More recently, researchers have also suggested that in addition to these well-known factors, differences in utilization of healthcare services such as cancer screening test may be partially explained by immigration status or foreign birth [8, 9].

Foreign-born residents constitute a growing proportion of the total population of the US. Evidence suggests that immigrants are often uninsured [10–13] and tend to experience various barriers to health care utilization, particularly for preventive care and screening services [12, 14, 15]. Ku and Matani [11] found that noncitizens and their children are much more likely to be uninsured, which greatly reduces their ability to obtain care. Even insured noncitizens and their children have less access to care than insured native-born citizens. Immigrants encounter more non-financial health care barriers. Besides, lower access to care is also influenced by the fact that foreign-born individuals are less likely to visit a doctor on a regular basis and are often more dissatisfied with their care [11].

Asian Americans, as one of the fastest growing population group in the United States, are characterized with a high proportion of immigrant population. The 2008 US Census data showed that approximately 67.1% of Asian Americans were born outside the United States, as compared with 12.5% among the total US population [16]. To date, little research has been done to examine how country of birth is linked to the pattern of health care access and utilization among Asian Americans, although such knowledge is critical for developing effective health care delivery and improving their overall health status. Thus, the objective of this study is to compare the access to care and use of health care services of US-born and foreign-born Asian residents in the United States.

Methods

Study Design and Sample

We used combined data from the 2003–2005 National Health Interview Survey (NHIS), a cross-sectional annual household interview survey using representative sample of American noninstitutionalized civilian population (<http://www.cdc.gov/nchs/nhis.htm>). The NHIS is conducted by the National Center for Health Statistics of Centers for Disease Control and Prevention, and is the principal source of information on the health of the American population. The survey uses a multistage sampling method and collects data using computer-

assisted personal interviewing. The sample is selected by a complex sampling design involving stratification, clustering, and multistage sampling. Our analyses were restricted to adults between the age of 18 and 64 who identified themselves as Asian. Three years of data were combined to obtain a larger sample size for the Asian American population and to yield sufficient statistical power to investigate health care—related indicators of Asian American subgroups. The total sample of this study was 2,500 respondents, among which 1998 individuals were born outside of the US.

Measures

Health Care Access—Three indicators of access to care included in the analyses were health insurance status, routine care access and sick care access. Insurance status was based on whether a participant had any kind of health insurance coverage. Routine care access and sickness care access were determined on whether a participant identified a physician's office or clinic or health center for routine/preventive care and for sick care, respectively.

Health Care Utilization—There were four indicators of health care utilization in this study, including doctor office visits, emergency room (ER) visits, seen/talked to a general doctor, and seen/talked to a medical specialist. Office visits were defined as having made one or more office visits in the past 12 months, and ER visits as having gone to a hospital emergency room about his/her own health. In addition, participants were asked during the past 12 months whether they have seen or talked to a general doctor who treats a variety of illnesses (a doctor in general practice, family medicine, or internal medicine) and whether they have seen or talked to a medical doctor who specializes in a particular medical disease or problem (other than obstetrician/gynecologist, psychiatrist or ophthalmologist). All the responses were dichotomous (yes/no).

Country of Birth—Participants were asked whether they were born in the United States. Based on the responses, participants were divided into foreign-born and US-born.

Covariates—Covariates included gender, age (18–24, 25–34, 35–44, 45–54, and 55–64 years), education (less than high school, high school graduate, and higher than high school), marital status (married/living together, divorced/separated/widowed, and never married), household income (lower than \$20,000 and \$20,000 and higher), employment status (currently employed and currently unemployed), health status (good–excellent and poor–fair), and national origins (Asian Indian, Chinese, Filipino, and other Asian). Other Asian included the remaining Asian ethnic groups such as Japanese, Korean and Vietnamese.

Statistical Analysis

Descriptive statistics were constructed to characterize Asian Americans by birthplace (US born vs. foreign-born). Bivariate analyses using Chi-square test were done to determine differences in major health care access and utilization indicators between US-born and foreign-born Asian Americans. Separate multivariate logistic regression models that controlled for sociodemographic factors were also estimated to compare the foreign-born group with the US-born group. Adjusted odds ratios (ORs) and 95% confidence intervals (CIs) were computed. We adjusted the weight in the combined data file by dividing each

sample weight in the pooled dataset by the number of years (3 years) that are being pooled. All calculations were performed with SUDAAN 10.0, accounting for the complex multistage sampling design of NHIS and the weight of the data. Statistical significance was determined as $P < 0.05$.

Results

Table 1 presents sociodemographic characteristics of US-born and foreign-born Asian American adults. Compared with native-born individuals, foreign-born individuals were more likely to be older (25–64) and married or living with a partner, and to report an education level of high school or lower than high school. Foreign-born Asian adults consisted of a higher percentage of Asian Indian individuals but a lower percentage of Filipino individuals compared with US-born Asian adults.

The unadjusted estimates of health care access and utilization by country of birth are presented in Table 2. Being foreign-born was negatively associated with having any health insurance coverage. Foreign-born Asian adults were also less likely to report a regular primary care source for either routine care ($P = 0.006$) or sick care ($P = 0.03$). The pattern was similar for health care utilization. Except for ER visits, foreign-born individuals were less likely to have made a doctor visit ($P = 0.001$), seen or talked to a general doctor ($P = 0.04$), or seen or talked to a medical specialist during the past 12 months ($P = 0.02$).

Table 3 presents the logistic regressions of health care access and utilization indicators, controlling for age, gender, education, household income, marital status, ethnicity/race, health status, and country of birth. Country of birth was significantly associated with all health care access indicators independent of socioeconomic and health status variables (health insurance: OR = 0.29, 95%CI = 0.18–0.48; routine care: OR = 0.52, 95%CI = 0.36–0.75; sick care: OR = 0.67, 95%CI = 0.47–0.96). Women were more likely to report having access to routine (OR = 1.74, 95%CI = 1.34–2.26) or sick care (OR = 1.62, 95%CI = 1.24–2.11) than men. Compared to Asian Indians, other Asian adults were less likely to have health insurance. Conversely, lower household income and marital status as “divorced/separated/widowed” or “never married” were associated with poorer access to care.

With respect to health care utilization, being foreign-born was negatively related to all indicators (office visit: OR = 0.58, 95%CI = 0.41–0.81; seen/talked to a general doctor: OR = 0.69, 95%CI = 0.52–0.90; seen/talked to a specialist: OR = 0.42, 95%CI = 0.28–0.63) but ER visit (OR = 0.84, 95%CI = 0.59–1.20). Women were more likely to have made a visit to the doctor (OR = 2.46, 95%CI = 1.92–3.14) and to have seen or talked to a general doctor (OR = 1.48, 95%CI = 1.18–1.88) during the past 12 months. Those in poorer health status were substantially more likely to have used all health care resources examined in this study.

Discussion

In this study, we sought to better understand the relationships between country of birth and health care access and utilization among Asian Americans. Our results demonstrated some variations in sociodemographic background for the two subgroups, which is important for understanding the health care access needs in the Asian community. Inconsistent with

previous findings based on US population that foreign-born nativity status was generally associated with lower socioeconomic status [13, 17], our study found that foreign-born Asian residents did not differ from those born in the US in income, even though they were more likely to have lower levels of education attainment. In addition, the rate of foreign-born individuals was higher among certain national groups.

Our data bolster previous studies supporting the association between socioeconomic status and use of health care services [18, 19]. In particular, those with lower household income were less likely to have a regular source of medical care or to see a physician. Moreover, Asian women were more likely than men to have a higher level of primary care access and utilization. This finding is consistent with previous research that showed that women have more of a willingness to seek care for sickness and prevention [20–24]. Women may also be more likely to use health care resources mostly due to seeking pregnancy and child-bearing care.

This study confirms results from previous national and regional surveys that indicated disparities in access to health care between US-born and foreign born Americans [23]. Even after adjusting for covariates, foreign-born Asian respondents were significantly more likely to report poorer access to care. Foreign-born individuals also reported less use of health care services, including office visits, seen/talked to a general doctor, and seen/talked to a medical specialist during the past 12 months. Moreover, the study provides empirical support that Asian Americans are not a homogeneous group and differences exist among ethnic groups in health care access and utilization. Details on the heterogeneity of Asian ethnic groups in sociodemographic factors and health outcomes using NHIS data were discussed in a separate paper [25].

It has been reported that lack of insurance coverage is a major barrier to care for Asian Americans in general [24]. Asian Americans are less likely than whites to have job-based health insurance coverage and thus more likely to be uninsured. Some of the insurance coverage differential is due to poorer coverage of non-citizens [26]. Another commonly identified reason for lack of health care access of Asian immigrants is the lack of linguistically and culturally competent health services. Over 36% of Asian Americans are considered linguistically isolated. Foreign-born individuals with limited English proficiency often experience difficulty in obtaining appropriate health care due to the lack of translated medical materials and the lack of trained medical interpreters or bilingual providers [24, 27]. In addition, self-medication and use of traditional treatment such as cupping or herbal medicine are popular medical behaviors among foreign-born Asian individuals, who are strongly influenced by their traditional health beliefs [27–29]. It is possible that foreign-born Asian Americans are less likely to establish a regular source of medical care because of their use of these traditional treatments and a perception of little need for western medicine and health services.

The only form of health care services that did not differ between the two subgroups based on country of birth is ER visit in the past 12 months. The ER medical care is unique because patients are treated regardless of their ability to pay, and are available 24 h a day, 7 days a week. The ER is usually a last resort for patients who cannot gain access to care at more

conventional settings [30, 31]. However, our evidence seems to indicate that lower utilization by foreign-born Asian residents does not translate into corresponding higher utilization of ER services. Not surprisingly, the likelihood of ER visits was highly associated with self-reported health status. Those who reported poor-fair health status were three times as likely to use ER during the past year as those with good–excellent health status. Individuals in poorer health were also more likely to use different kinds of health care services, although they did not necessarily have better healthcare access.

Several limitations of this study should be noted. It was based on self-report and may be subject to recall bias. The cross-sectional design of NHIS also limits our ability to draw inferences about causal pathways, which highlights the need for longitudinal studies on the use of health care services among Asian immigrants. The data did not include reason for ER visits, and thus, we were unable to compare the non-urgent ER visits or primary care-preventable ER visits between foreign-born and US-born individuals. In addition, the NHIS was conducted in only English and Spanish but not in any Asian languages. Therefore, the Asian respondents may be more educated and proficient in English than nonrespondent Asian adults.

Conclusions

The pattern of access and utilization of health care plays an important role in the quality of health care and the quality and years of healthy life. Our study demonstrated that immigration status as reflected by country of birth may affect the use of health care among Asian Americans. Various financial, linguistic, and cultural barriers may prevent Asian immigrants from access and utilization of health care services. To fully address this issue, it will require joint efforts of policymakers, health care providers, and health educators. In addition to improving overall health insurance coverage, it is important to create more culturally sensitive health education materials about chronic diseases, medications, available health services, and modes of access. There is also an urgent need for more culturally sensitive health services that are acceptable to the Asian community, probably requiring time and energy being directed to obtaining input and guidance from this particular community and patient population.

Acknowledgments

Funding/Support This work was supported in part with grant 5P20MD000272-05 from the National Institutes of Health National Center for Minority Health and Health Disparities (NIH/NCMHD) and cooperative agreement 1MPCMP0610110100 from the Department of Health and Human Services Office of Minority Health.

References

1. US Department of Health and Human Services. Healthy People 2010. 2nd. Vol. 1. Washington: US Government Printing Office; 2000. Understanding and improving health and objectives for improving health.
2. Bindman AB, Grumbach K, Osmond D, Vranizan K, Stewart AL. Primary care and receipt of preventive services. *J Gen Intern Med*. 1996; 11(5):269–76. [PubMed: 8725975]
3. Politzer RM, Yoon J, Shi L, Hughes RG, Regan J, Gaston MH. Inequality in America: the contribution of health centers in reducing and eliminating disparities in access to care. *Med Care Res Rev*. 2001; 58(2):234–48. [PubMed: 11398647]

4. Epstein AM, Ayanian JZ, Keogh JH, et al. Racial disparities in access to renal transplantation: clinically appropriate or due to underuse or overuse? *N Engl J Med*. 2000; 343(21):1537–44. [PubMed: 11087884]
5. Lillie-Blanton M, Maleque S, Miller W. Reducing racial, ethnic, and socioeconomic disparities in health care: opportunities in national health reform. *J Law Med Ethic*. 2008; 36(4):693–702.
6. Rooks RN, Simonsick EM, Klesges LM, Newman AB, Ayonayon HN, Harris TB. Racial disparities in health care access and cardiovascular disease indicators in black and white older adults in the health ABC study. *J Aging Health*. 2008; 20(6):599–614. [PubMed: 18625758]
7. Schneider EC, Xaslavsky AM, Epstein AM. Racial disparities in the quality of care for enrollees in medicare managed care. *JAMA*. 2002; 287(10):1288–94. [PubMed: 11886320]
8. Goel MS, Wee CC, McCarthy EP, Davis RB, Ngo-Metzger Q, Phillips RS. Racial and ethnic disparities in cancer screening the importance of foreign birth as a barrier to care. *J Gen Intern Med*. 2003; 18(12):1028–35. [PubMed: 14687262]
9. Jerant AF, Fenton JJ, Franks P. Determinants of racial/ethnic colorectal screening disparities. *Arch Intern Med*. 2008; 168(12):1317–24. [PubMed: 18574089]
10. Carrasquillo O, Carrasquillo AI, Shea S. Health insurance coverage of immigrants living in the United States: differences by citizenship status and country of origin. *Am J Public Health*. 2000; 90(6):917–23. [PubMed: 10846509]
11. Ku L, Matani S. Left out: immigrants' access to health care and insurance. *Health Aff*. 2001; 20(1):247–56.
12. Morales LS, Lara M, Kington RS, Valdez RO, Escarce JJ. Socioeconomic, cultural, and behavioral factors affecting Hispanic health outcomes. *J Health Care Poor Underserved*. 2002; 13(4):477–503. [PubMed: 12407964]
13. Thame M, Richard C, Casebeer AW, Ray NF. Health insurance coverage among foreign-born US residents: the impact of race, ethnicity, and length of residence. *Am J Public Health*. 1997; 87(1):96–102. [PubMed: 9065235]
14. Johnson CE, Mues KE, Mayne SL, Kiblawi AN. Cervical cancer screening among immigrants and ethnic minorities: a systematic review using the health belief model. *J Low Genit Tract Dis*. 2008; 12(3):232–41. [PubMed: 18596467]
15. Pylypchuk Y, Hudson J. Immigrants and the use of preventive care in the United States. *Health Econ*. 2009; 18(7):783–806. [PubMed: 18726922]
16. U.S. Census Bureau. [Accessed 12 June 2010] American Community Survey. 2008. Available at www.census.gov/acs/www
17. Leclerc FB, Jensen L, Biddlecom AE. Health care utilization, family context and adaptation among immigrants to the United States. *J Health Soc Behav*. 1994; 35(4):370–84. [PubMed: 7844331]
18. Allin S, Masseria C, Mossialos E. Measuring socioeconomic differences in use of health care services by wealth versus by income. *Am J Public Health*. 2009; 99(10):1849–55. [PubMed: 19150899]
19. Alter D, Naylor C, Austin P, Tu J. Effects of socioeconomic status on access to invasive cardiac procedures and on mortality after acute myocardial infarction. *N Engl J Med*. 1999; 341(18):1359–67. [PubMed: 10536129]
20. Bertakis KD, Azari R, Helms J, Callabhan EJ, Robbins JA. Gender differences in the utilization of health care services. *J Fam Pract*. 2000; 49(2):147–52. [PubMed: 10718692]
21. Merzel C. Gender differences in health care access indicators in an urban, low-income community. *Am J Public Health*. 2000; 90(6):909–16. [PubMed: 10846508]
22. Verbrugge LM. The twain meet: empirical explanations of sex differences in health and mortality. *J Health Soc Behav*. 1989; 30(3):282–304. [PubMed: 2778300]
23. Lasser KE, Himmelstein DU, Woolhandler S. Access to care, health status, and health disparities. Results of a cross-national population-based survey. *Am J Public Health*. 2006; 96(7):1300–7. [PubMed: 16735628]
24. Ro M. Moving forward: addressing the health of Asian American and Pacific Islander women. *Am J Public Health*. 2002; 92(4):516–9. [PubMed: 11919042]
25. Ye J, Rust G, Baltrus P, Daniels E. Cardiovascular risk factors among Asian Americans: results from a national health survey. *Ann Epidemiol*. 2009; 19(10):718–23. [PubMed: 19560369]

26. Kaiser Family Foundation. [Accessed 14 June 2010] Health Insurance Coverage and Access to Care Among Asian Americans and Pacific Islanders. Available at <http://www.healthpolicy.ucla.edu/pubs/files/healthinsurancecoverageandaccesstocareamongasian%20americansandpacificislanders.pdf>
27. Ngo-Metzger Q, Massagli MP, Clarridge BR, et al. Linguistic and cultural barriers to care: perspectives of Chinese and vietnamese immigrants. *J Gen Intern Med*. 2003; 18(1):44–52. [PubMed: 12534763]
28. Ma G. Between two worlds: the use of traditional and western health services by Chinese immigrants. *J Community Health*. 1999; 24(6):421–37. [PubMed: 10593423]
29. Uba L. Cultural barriers to health care for southeast Asian refugees. *Public Health Rep*. 1992; 107(5):544–8. [PubMed: 1410235]
30. Grumbach K, Keane D, Bindman A. Primary care and public emergency department overcrowding. *Am J Public Health*. 1993; 83(3):372–8. [PubMed: 8438975]
31. Rust G, Ye J, Baltrus P, Daniels E, Adesunloye B, Fryer GE. Practical barriers to timely primary care access. Impact on adult use of emergency department services. *Arch Intern Med*. 2008; 168(15):1705–10. [PubMed: 18695087]

Sociodemographic characteristics of the overall sample population, US born population, and foreign-born population, NHIS 2003–2005

Table 1

Characteristics	Overall, N = 2,500		US-born, N = 502		Foreign-born, N = 1,998		P values
	n	Weighted % (SE)	n	Weighted % (SE)	n	Weighted % (SE)	
Age							<0.001
18–24	315	16.2 (1.1)	133	36.8 (3.4)	182	11.2 (1.1)	
25–34	709	26.5 (1.1)	132	22.8 (2.2)	577	27.6 (1.3)	
35–44	631	24.3 (1.0)	83	15.1 (1.7)	548	26.4 (1.2)	
45–54	528	21.0 (1.0)	98	16.5 (2.7)	430	21.9 (1.1)	
55–64	317	12.0 (0.7)	56	8.9 (1.1)	261	12.9 (0.8)	
Gender							0.4
Men	1,200	50.8 (1.2)	257	52.8 (3.5)	943	50.5 (1.3)	
Women	1,300	49.2 (1.2)	245	47.2 (3.5)	1,055	49.5 (1.3)	
Education							0.003
Lower than high school	250	10.5 (0.8)	29	6.4 (1.6)	221	11.5 (0.9)	
High school	132	18.3 (1.1)	77	3.4 (1.0)	346	6.3 (0.7)	
Higher than high school	2,079	71.2 (1.2)	391	90.2 (2.1)	1,688	82.2 (1.1)	
Household income, \$							0.45
Lower than 20,000	426	14.7 (1.1)	97	16.1 (2.5)	329	14.4 (1.2)	
20,000 and higher	1,897	85.3 (1.1)	369	83.9 (2.5)	1,528	85.6 (1.2)	
Employment status							0.6
Currently employed	1,919	75.4 (1.1)	397	74.3 (2.7)	1,522	75.7 (1.2)	
Currently unemployed	571	24.6 (1.1)	104	25.7 (2.7)	467	24.3 (1.2)	
Marital status							<0.001
Married/living together	1,550	68.7 (1.2)	213	48.2 (2.8)	1,337	73.8 (1.3)	
Divorced/separated/widowed	269	6.5 (0.5)	55	6.0 (1.0)	214	6.7 (0.5)	
Never married	670	24.8 (1.2)	233	45.9 (3.0)	437	19.5 (1.2)	
National origins							<0.001
Asian Indian	507	21.1 (1.2)	49	9.5 (1.6)	458	23.9 (1.4)	
Chinese	577	18.7 (1.1)	101	19.2 (2.3)	376	18.5 (1.1)	
Filipino	550	21.4 (1.2)	158	32.3 (2.9)	392	18.9 (1.2)	

Characteristics	Overall, N = 2,500		US-born, N = 502		Foreign-born, N = 1,998		P values
	n	Weighted % (SE)	n	Weighted % (SE)	n	Weighted % (SE)	
Other Asians	966	38.8 (1.3)	194	39.0 (2.6)	772	38.8 (1.5)	0.3
Health status							
Good–excellent	2,342	94.2 (0.5)	471	95.0 (1.05)	1,871	93.8 (0.6)	
Poor–fair	157	5.8 (0.5)	30	5.0 (1.05)	127	6.2 (0.6)	

Table 2
Percentages of health care access and utilization by Asian American adults, NHIS 2003–2005

	US-born, N = 502 Weighted % (SE)	Foreign-born, N = 1,998 Weighted % (SE)	P value
<i>Access to care</i>			
Health insurance	88.7 (1.8)	78.9 (1.2)	<0.001
Routine care access	80.5 (2.3)	72.8 (1.4)	0.006
Sick care access	81.7 (2.1)	76.1 (1.4)	0.03
<i>Health care utilization</i>			
Office visits, past 12 mo	80.5 (2.6)	70.2 (1.3)	0.001
ER visits, past 12 mo	12.0 (1.5)	11.4 (0.8)	0.13
Seen/talked to a general doctor, past 12 m	62.5 (3.2)	55.3 (1.2)	0.04
Seen/talked to a med specialist, past 12 m	22.5 (3.7)	12.9 (0.9)	0.02

The percentages refer to the proportion of respondents chose “Yes” to the questions

Table 3
Adjusted odds ratios for predictors of health care access and utilization among Asian American adults, NHIS 2003–2005

Characteristics	Access to care		Health care utilization				
	Health insurance	Routine care access	Sick care access	Office visits, past 12 mo	ER visits, past 12 mo	Seen/talked to a general doctor, past 12 mo	Seen/talked to a medical specialist, past 12 mo
<i>Age</i>							
25–34	2.63 (1.57, 4.40)	1.07 (0.70, 1.64)	1.07 (0.72, 1.59)	0.76 (0.51, 1.14)	0.90 (0.50, 1.61)	0.87 (0.56, 1.35)	1.03 (0.59, 1.79)
35–44	2.85 (1.70, 4.80)	1.57 (1.00, 2.47)	1.56 (1.00, 2.43)	0.80 (0.51, 1.26)	0.77 (0.42, 1.41)	1.12 (0.71, 1.76)	1.51 (0.82, 2.78)
45–54	2.99 (1.69, 5.30)	1.38 (0.85, 2.22)	1.47 (0.91, 2.37)	0.87 (0.56, 1.35)	0.71 (0.36, 1.39)	1.08 (0.67, 1.29)	1.48 (0.79, 2.78)
55–64	3.76 (2.02, 6.98)	1.64 (0.95, 2.82)	1.74 (1.02, 2.98)	1.19 (0.69, 2.04)	0.97 (0.50, 1.91)	1.71 (1.06, 2.78)	2.73 (1.48, 5.06)
18–24	1	1	1	1	1	1	1
<i>Gender</i>							
Women	1.44 (1.07, 1.92)	1.74 (1.34, 2.26)	1.62 (1.24, 2.11)	2.46 (1.92, 3.14)	0.95 (0.72, 1.25)	1.48 (1.18, 1.88)	1.17 (0.85, 1.61)
Men	1	1	1	1	1	1	1
<i>Education</i>							
Lower than high school	0.50 (0.32, 0.77)	0.92 (0.60, 1.40)	0.86 (0.56, 1.34)	0.70 (0.47, 1.04)	1.22 (0.71, 2.11)	0.85 (0.59, 1.21)	0.42 (0.24, 0.74)
High school	0.37 (0.22, 0.62)	0.54 (0.33, 0.88)	0.52 (0.33, 0.81)	0.36 (0.23, 0.58)	1.45 (0.89, 2.37)	0.53 (0.35, 0.86)	0.45 (0.22, 0.90)
Higher than high school	1	1	1	1	1	1	1
<i>Household income, \$</i>							
Lower than 20,000	0.34 (0.24, 0.49)	0.41 (0.30, 0.56)	0.49 (0.35, 0.68)	0.45 (0.33, 0.61)	1.05 (0.68, 1.61)	0.66 (0.49, 0.90)	0.98 (0.60, 1.59)
20,000 and higher	1	1	1	1	1	1	1
<i>Employment</i>							
Currently unemployed	0.97 (0.69, 1.38)	1.00 (0.75, 1.33)	0.86 (0.61, 1.19)	0.97 (0.71, 1.32)	0.77 (0.53, 1.12)	0.98 (0.77, 1.25)	1.18 (0.83, 1.68)
Currently employed	1	1	1	1	1	1	1
<i>Marital status</i>							
Never married	0.58 (0.37, 0.90)	0.54 (0.37, 0.79)	0.55 (0.36, 0.83)	0.74 (0.50, 1.11)	1.57 (0.94, 2.63)	0.67 (0.47, 0.95)	0.78 (0.49, 1.24)
Divorced/separated/widowed	0.74 (0.48, 1.16)	0.50 (0.39, 0.77)	0.50 (0.35, 0.71)	0.75 (0.55, 1.01)	0.78 (0.49, 1.24)	0.67 (0.49, 0.92)	0.69 (0.47, 1.01)
Married/living together	1	1	1	1	1	1	1
<i>Ethnic group</i>							
Chinese	1.49 (0.92, 2.42)	0.80 (0.56, 1.14)	0.93 (0.66, 1.31)	0.79 (0.58, 1.08)	0.94 (0.60, 1.47)	0.78 (0.58, 1.05)	0.66 (0.45, 0.98)
Filipino	1.13 (0.72, 1.76)	1.25 (0.87, 1.80)	1.36 (0.93, 1.99)	1.08 (0.77, 1.53)	0.63 (0.36, 1.08)	0.93 (0.68, 1.28)	0.73 (0.50, 1.07)

Characteristics	Access to care		Health care utilization				
	Health insurance		Routine care access		Sick care access		Seen/talked to a med specialist, past 12 mo
Other Asians	0.67 (0.46, 0.96)	1	1.14 (0.79, 1.64)	1	1.33 (0.90, 1.97)	1	0.93 (0.67, 1.29)
Asian Indian							1.09 (0.68, 1.74)
<i>Health status</i>							1
Poor-fair	0.72 (0.40, 1.27)	1	1.23 (0.72, 2.09)	1	1.12 (0.64, 1.96)	1	2.57 (1.64, 4.04)
Good-excellent							1
<i>Country of birth</i>							
Foreign-born	0.29 (0.18, 0.48)	1	0.52 (0.36, 0.75)	1	0.67 (0.47, 0.96)	1	0.42 (0.28, 0.63)
US-born							1